



LOUISIANA DEPARTMENT OF NATURAL RESOURCES

Tuscaloosa Marine Shale Louisiana Activity Update

By

**James H. Welsh
Commissioner of Conservation**

**David P. Elfert
Office of Conservation**

And

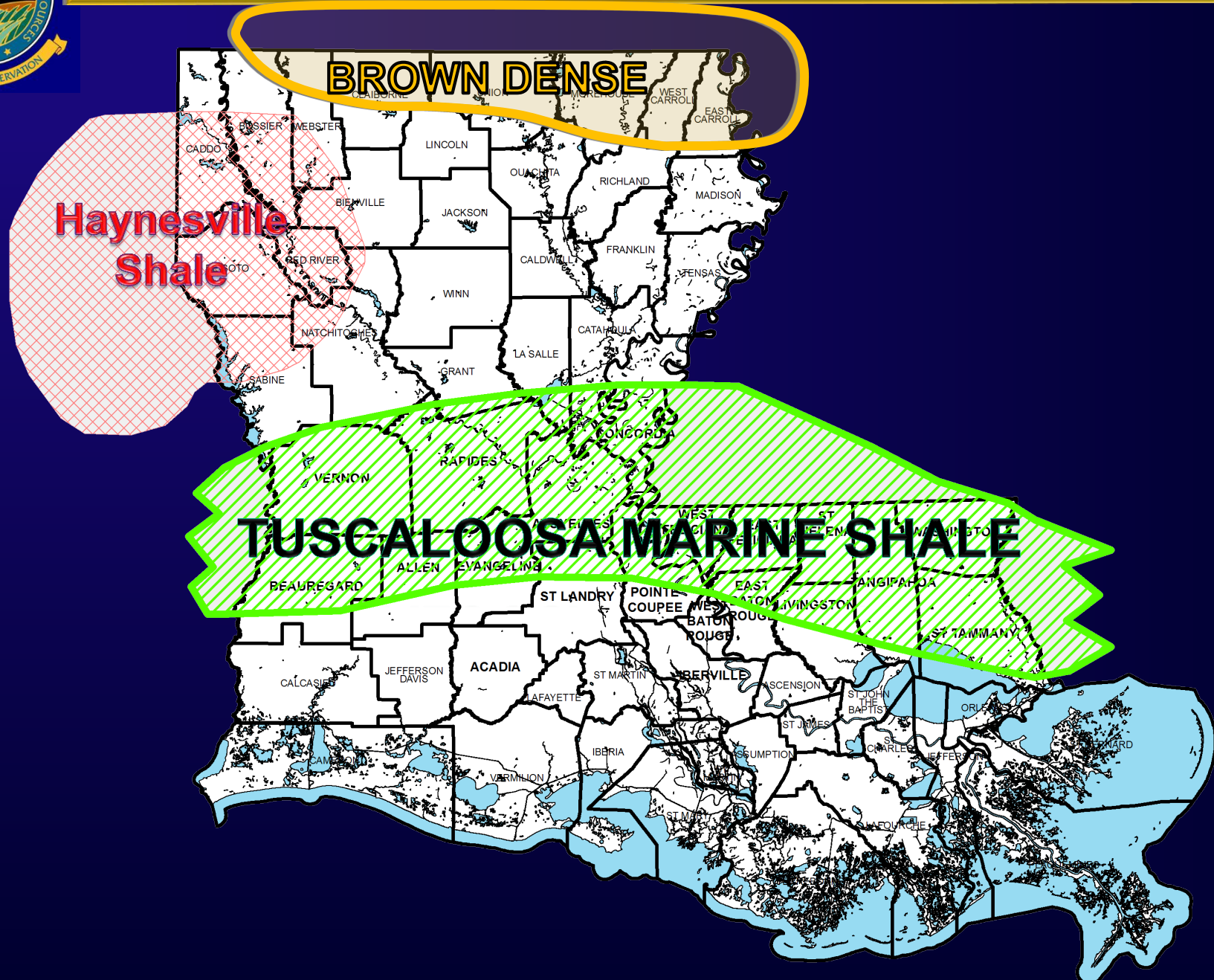
**Louis Temento
Louisiana Office of Mineral Resources**

**March 27, 2014
West Feliciana Parish**



Tuscaloosa Marine Shale Play

Lower Smackover "Brown Dense" and Haynesville Shale Plays





Challenges of Resource Plays

- Resource or source rock plays-where hydrocarbons originated
- Extraction of hydrocarbons that have not migrated out
- Large geographic area involved
- Requires high technology methods
- Horizontal drilling for increased surface area to make venture economical
- Hydro-fracturing “Fracking”
- Large amounts of water for fracking
- Flowback water management
- Long lateral lengths requiring large pooled units to meet economic needs
- Quick regulatory action to meet new economical and environmental needs
- Cross Unit Laterals
- Low natural gas prices
- Urban drilling activity-environmental concerns/solutions



WHAT IS THE TMS?

Tuscaloosa Marine Shale (TMS)

- Sedimentary rock composed of compacted, lithified clays and very fine sand grains (silt)
- Contains oil generated from organic matter deposited with the sediments
- Oil held tightly between the clays and silts
- Deposited approximately 90 million years ago, marine (ocean) environment
- Depth ranges from -13,000 feet to > -15,000 in E-W Feliciana area
- Approximately -15,000 feet in Ethel Field, East Feliciana Parish
- Will require horizontal wells with long lateral length and hydraulic fracturing to extract the oil economically
- Economics still uncertain, play is in early stages of development
- 1997 LSU study provides in-depth look at the play/Originally exploited in 1975
- Callon, Texas Pacific original operators in TMS
- Encore, Devon, Encana and Indigo II LA. (western "Eagle Ford" part of trend) early operators
- EOG, Justiss Oil Co., Conterra, Halcon, Goodrich latest operators to enter the TMS play



Regulating the TMS Activity

LDNR- Offices/Organization

Permitting/Drilling/Production

Inspection/Enforcement

E&P Waste Disposal

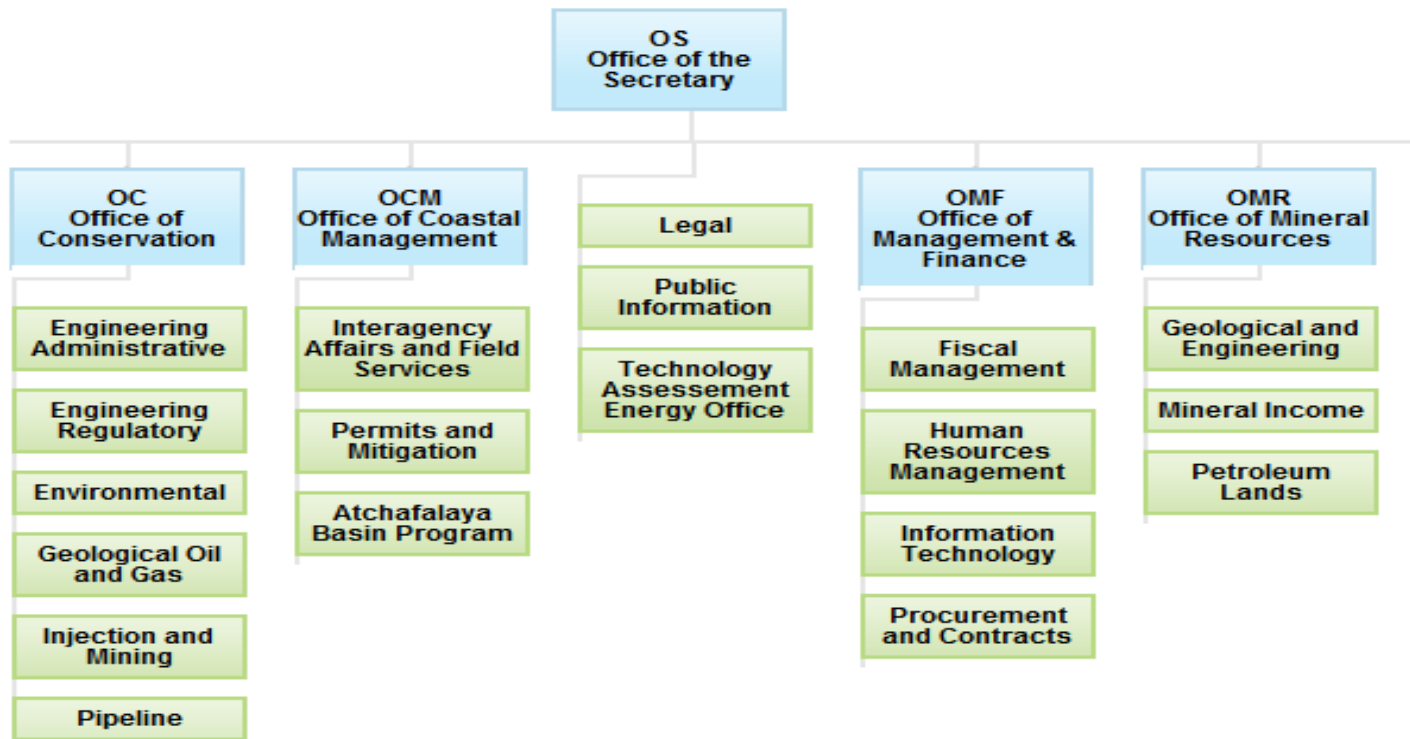
Groundwater Protection

Frac Related Rules/Reporting



ORGANIZATIONAL CHART

LOUISIANA DEPARTMENT OF NATURAL RESOURCES

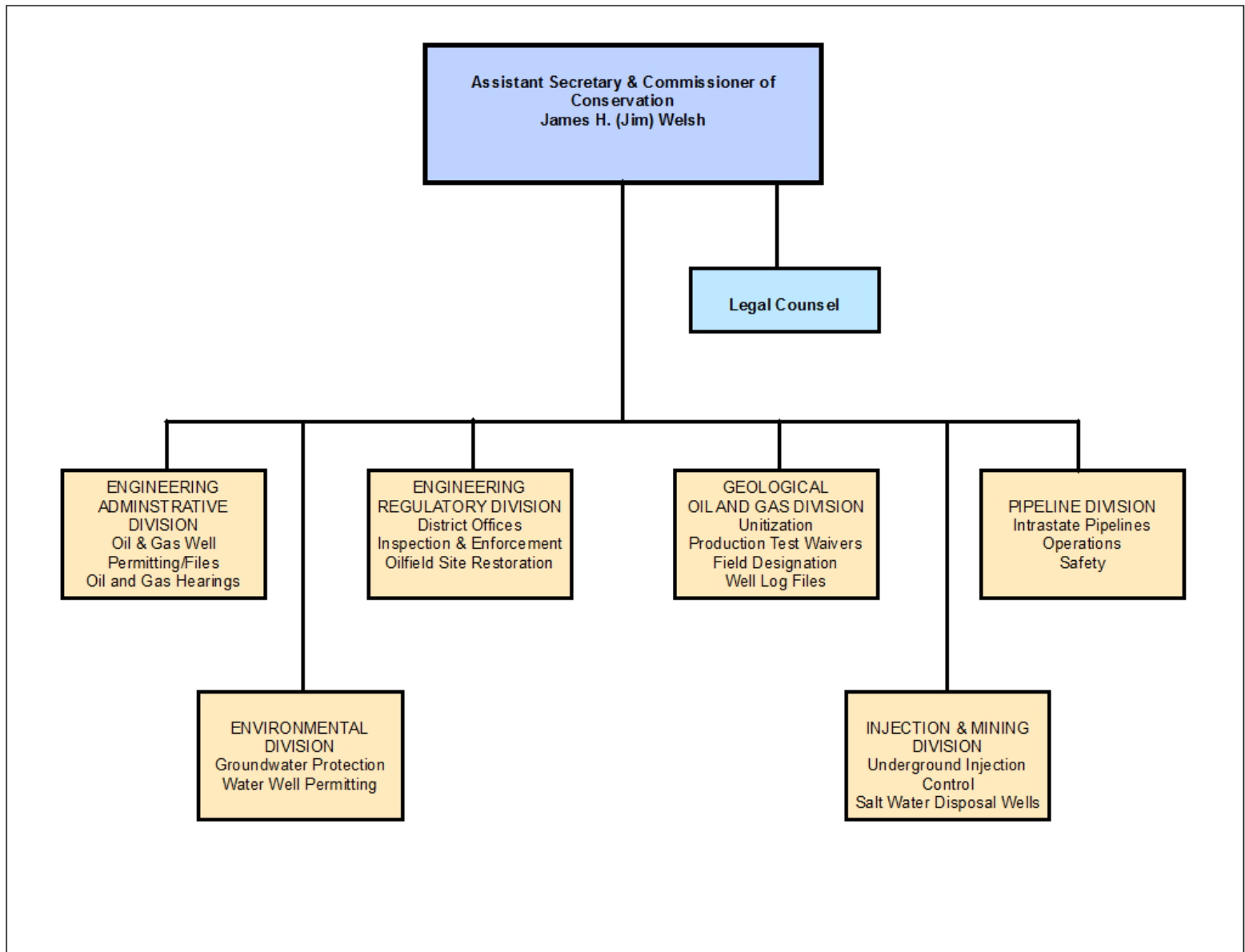


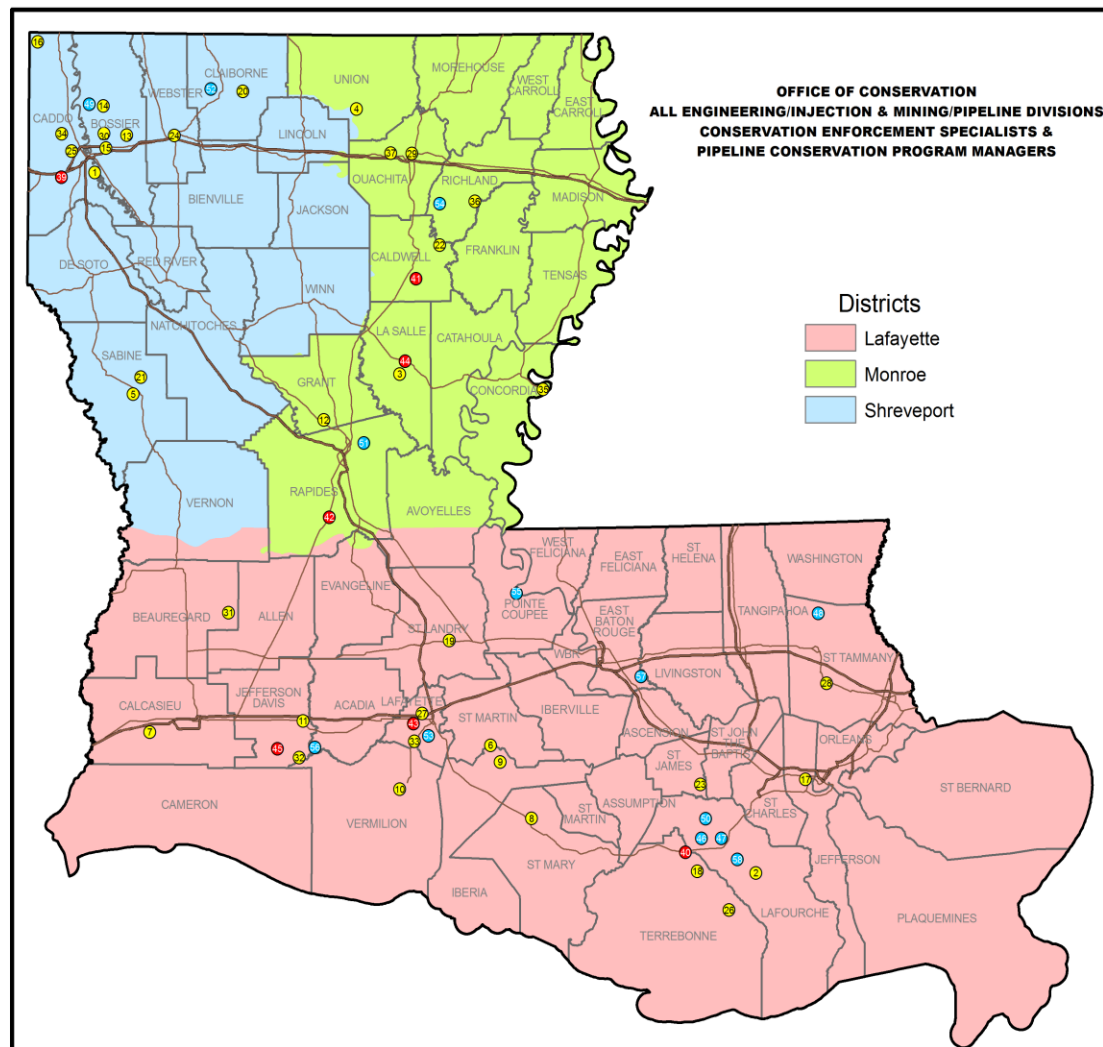
Boards and Commissions

Atchafalaya Basin Research and Promotion Board
Atchafalaya Basin Technical Advisory Group
Oilfield Site Restoration Commission
Oyster Lease Damage Evaluation Board
State Mineral and Energy Board
Water Resources Commission
Water Management Advisory Task Force



Office of Conservation Organization



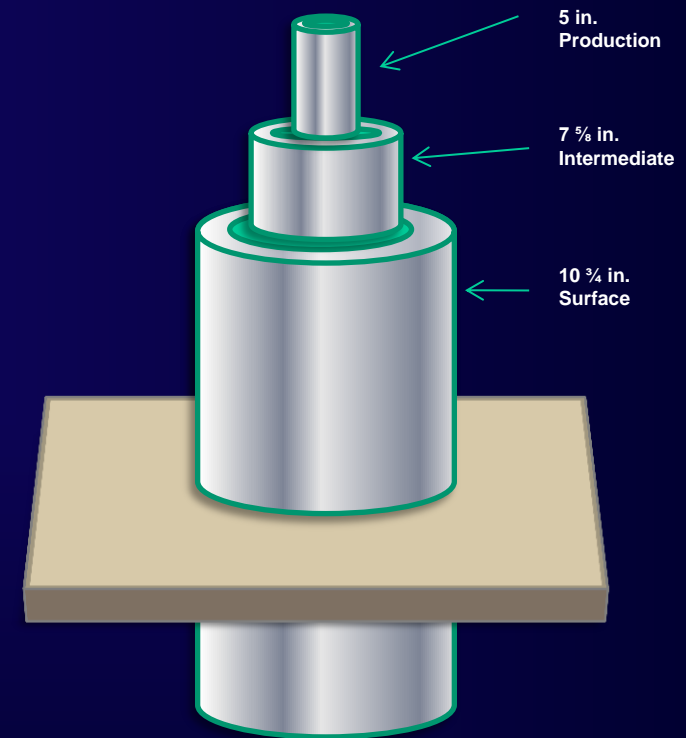


August 12, 2013

Label	Name	City	Division
1	David Adams	Shreveport	Engineering
2	Keith Adams	Lockport	Engineering
3	Twyman Appleby	Trout	Engineering
4	James "Ronnie" Atkins	Downsville	Engineering
5	David Barnhill	Many	Engineering
6	Bret Barras	Saint Martinville	Engineering
7	Byron Chamblee	Sulphur	Engineering
8	Charles "Chuck" Cloutier, Jr.	Franklin	Engineering
9	Lyn Decuir	Loreauville	Engineering
10	Dan Devenport	Abbeville	Engineering
11	Joe Durham	Jennings	Engineering
12	Robbie J. Edwards	Colfax	Engineering
13	Henry Steven Fomby	Houghton	Engineering
14	Richard Guice	Benton	Engineering
15	Wilton "Rick" Guice	Bossier City	Engineering
16	Gerald Humphrey	Rodessa	Engineering
17	Shawney Jones	New Orleans	Engineering
18	Joseph LaGarde IV	Houma	Engineering
19	Charles "Keith" Marks	Port Barre	Engineering
20	Jerry Mathewes	Homer	Engineering
21	Franklin L. Moore	Many	Engineering
22	James Heath Mott	Columbia	Engineering
23	Selma Oubre	Vachere	Engineering
24	Charles Posey	Minden	Engineering
25	Richard Robertson	Shreveport	Engineering
26	Ray Robichaux	Montegut	Engineering
27	Marion "Butch" Romero	Scott	Engineering
28	John T. Schell	Mandeville	Engineering
29	Lacey Smith	West Monroe	Engineering
30	William "Bill" Sniffen	Houghton	Engineering
31	Richard "Wayne" Soleau	Dry Creek	Engineering
32	Leo "Kenneth" Somier	Lake Arthur	Engineering
33	Mike Theriot	Lafayette	Engineering
34	Georgiana Violet	Shreveport	Engineering
35	Kenneth C. Ware	Vidalia	Engineering
36	Donald G. Womack	Mangham	Engineering
37	Lee W. Woodridge	West Monroe	Engineering
38	Vacant		
39	Peter L. Bradford	Shreveport	Injection & Mining
40	William L. Cames	Houma	Injection & Mining
41	Rex L. Darden	Grayson	Injection & Mining
42	Jasper W. Hebert	Forest Hill	Injection & Mining
43	Sarah Hitchcock	Lafayette	Injection & Mining
44	William E. Jones	Jena	Injection & Mining
45	Kevin Sonnier	Lake Arthur	Injection & Mining
46	Dana Arable, CPM	Raceland	Pipeline Safety
47	Paul M. Arable	Raceland	Pipeline Safety
48	Walter E. Blocker, Jr.	Covington	Pipeline Safety
49	James Burns	Benton	Pipeline Safety
50	Mark Champagne, CPM	Raceland	Pipeline Safety
51	Phillip J. Cole	Pineville	Pipeline Safety
52	Ronald Day, CPM	Homer	Pipeline Safety
53	Brian D. Flores	Lafayette	Pipeline Safety
54	Tina W. Williams	Rayville	Pipeline Safety
55	Troy Laurent	Morganza	Pipeline Safety
56	Wayne O. Leger	Lake Arthur	Pipeline Safety
57	Jorge Morice	Baton Rouge	Pipeline Safety
58	Jacques Rotolo	Lockport	Pipeline Safety
59	Vacant		

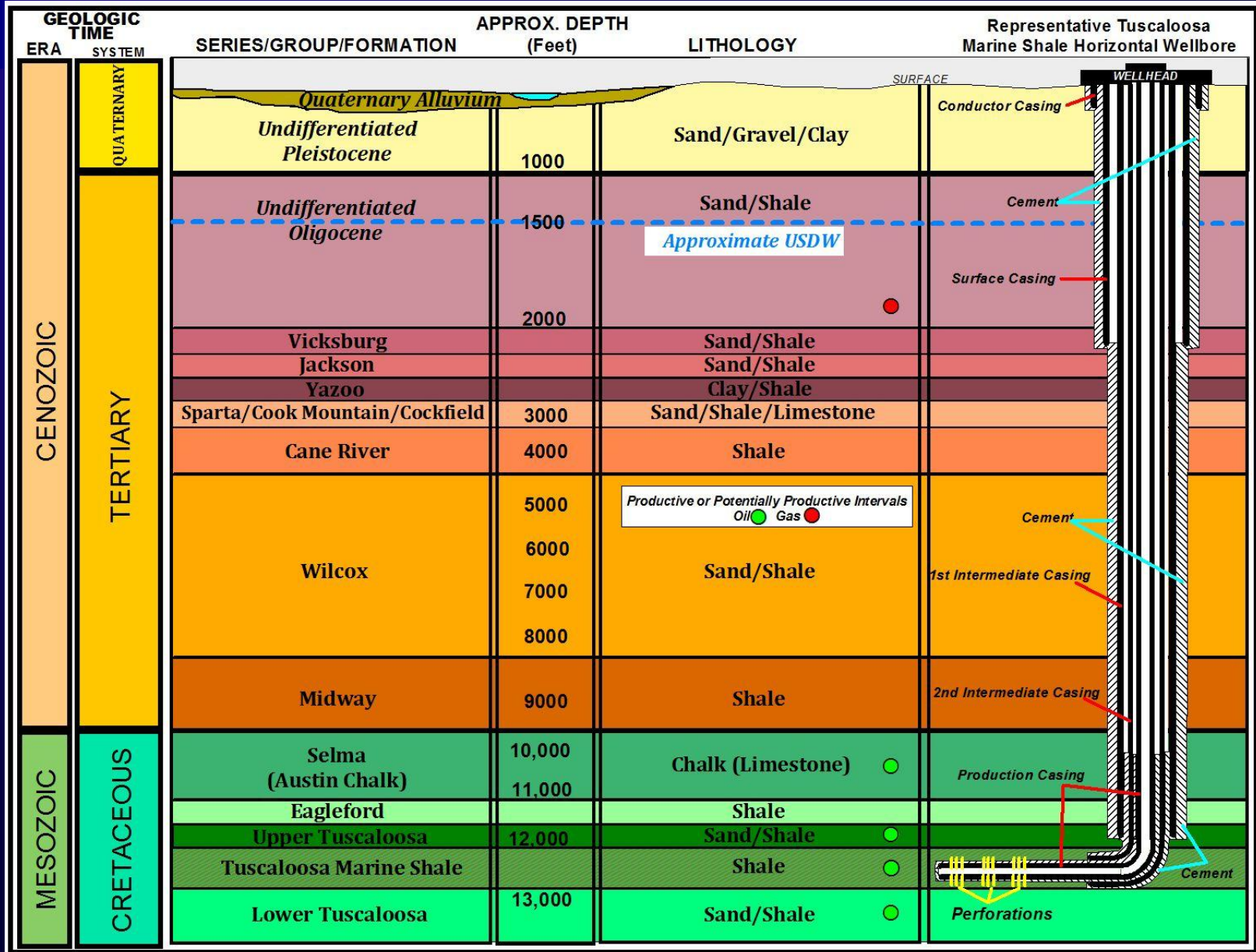
Protection of Groundwater Through Well Construction

- Construction requirements result in protection of USDW and isolation of hydrocarbon bearing zones.
 - Multiple casing strings
 - Minimum setting depth
 - Cement requirements
 - Pressure testing






T.M.S. Generalized Horizontal Well





Ground Water Use Advisory

	
Louisiana.gov > Department of Natural Resources	
For Release: October 16, 2008	Web Posting
	Ground Water Use Advisory: Commissioner of Conservation Recommends Wise Water Use Planning in the Haynesville Shale
	Commissioner of Conservation Jim Welsh recommends that oil and gas operators with interest in developing the Haynesville Shale in Northwest Louisiana choose their water sources for use in drilling or hydraulic fracture stimulation operations wisely. Of particular interest are areas in the lower Caddo and Bossier Parishes and DeSoto Parish where the Carrizo - Wilcox aquifer is used as the main source of drinking water supply for domestic

Therefore, if ground water must be used for drilling or hydraulic fracture stimulation purposes, it is recommended that the Red River Alluvial aquifer be utilized for these purposes, where feasible, as the source of ground water supply in lieu of the Carrizo - Wilcox aquifer.

Based on USGS and other published information on ground water resources in Northwest Louisiana, the Red River Alluvial aquifer system is a high yield system comprised of coarse gravel and sand formations continuously recharged by the surface waters of the Red River. It is further documented that the Red River Alluvial aquifer system, due to its hardness and high dissolved solids, is seldom used for domestic and public supply

The Commissioner further encourages oil and gas operators to use the available surface water resources or other acceptable alternative water sources in Northwest Louisiana, where practical and feasible.

Carrizo - Wilcox aquifer for hydraulic fracture stimulation operations according to state law.

The Commissioner further encourages oil and gas operators to use the available surface water resources or other acceptable alternative water sources in Northwest Louisiana, where practical and feasible.

Provided below are links to published documents, resources and references available for water quality and use in Northwest Louisiana. If you have any questions or need further clarification, please contact Environmental Division staff at 225-342-8244 or by email at <http://dnr.louisiana.gov/gwater>.



Directive for Frac Water Reporting



BOBBY JINDAL
GOVERNOR

State of Louisiana
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF CONSERVATION
MEMORANDUM

SCOTT A. ANGELLE
SECRETARY
JAMES H. WELSH
COMMISSIONER OF CONSERVATION

September 15, 2009

TO: All Concerned
FROM: James H. Welsh
Commissioner of Conservation
SUBJECT: Reporting Requirements for Water Use in E&P Operations

To promote effective groundwater resource management and to aid in the development of policies and regulations to protect these resources, it is the policy of this Office to require the reporting of information related to water use in drilling, completion, stimulation and workover operations.


Specifically, the water source and associated volume must be reported on page two (2) of the 'Well History and Work Resume Report' (Form WH-1) which must be filed within twenty days after completion or recompletion operations. The water sources must be identified by either the water well number or water body name, as appropriate. Separate water volumes for rig supply use and stimulation operation use must be provided. A completed example of page two (2) of the 'Well History and Work Resume Report' (Form WH-1) is attached.

Due to revisions of the WH-1 form, water source and associated volumes are now reported on page 3.
fracturing stimulation operations.

A revised 'Well History and Work Resume Report' (Form WH-1) is available from the department web site at the following address: <http://dnr.louisiana.gov/cons/CONSEREN/documents/WH-1.dot>

The policy is effective immediately. Questions on implementation may be directed to Mr. Robert "Bob" Romero at (225) 342-8242 or robert.romero@la.gov.

OFFICE OF CONSERVATION
OF THE STATE OF LOUISIANA


JAMES H. WELSH
COMMISSIONER OF CONSERVATION

JHW:CS
Attachment

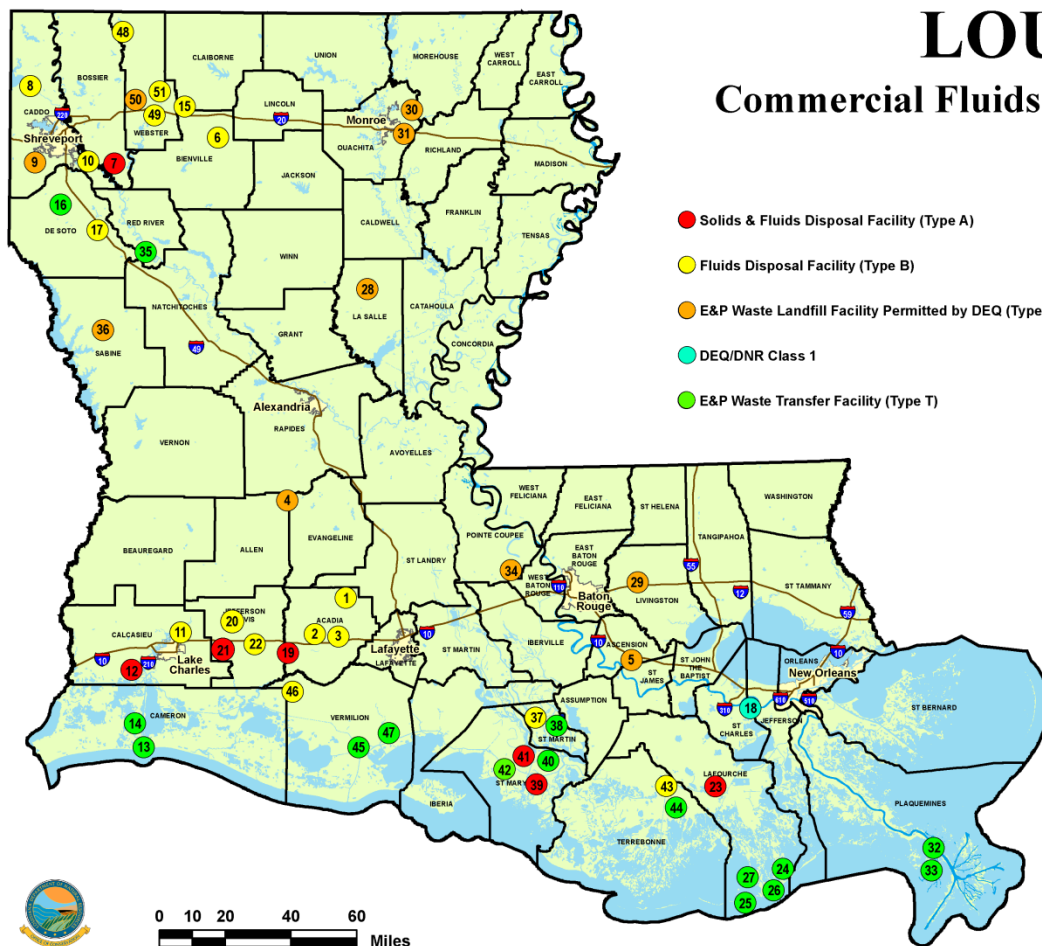


Waste Management

- Exploration & Production (E&P) Wastes primarily include:
 - Drilling fluids
 - Flowback water
 - Produced water
- E&P Waste regulations ensure proper disposal to minimize environmental impacts of resource development.
- Manifest and reporting systems ensure transparency and accountability.
- Waste Management options include:
 - Onsite disposal using conservative limiting criteria
 - Well injection
 - Commercial disposal
 - Recycling in limited cases

LOUISIANA

Commercial Fluids & Solids Disposal Facilities



Label	Facility Name	Parish	Facility Type
1	CHI dba Guillory Tank Truck Service	Acadia	Fluids
2	Saline Injection Systems Co.	Acadia	Fluids
3	Habets Oilfield Saltwater Service	Acadia	Fluids
4	ESI - Timberlane Landfill	Allen	E&P Waste Landfill Permitted by DEQ
5	BFI - Colonial Landfill	Ascension	E&P Waste Landfill Permitted by DEQ
6	Bear Creek Environmental Systems	Bentville	Fluids
7	U.S. Liquids - Elm Grove	Bossier	Solids/Fluids
8	Key Energy Services - Oil City	Caddo	Fluids
9	Woolworth Landfill	Caddo	E&P Waste Landfill Permitted by DEQ
10	CCS - Shreveport SWD	Caddo	Fluids
11	Louisiana Tank	Calcasieu	Fluids
12	Chemical Waste Management	Calcasieu	Solids/Fluids
13	Newpark - Cameron	Cameron	Transfer Station
14	U.S. Liquids - Cameron	Cameron	Transfer Station
15	Key Energy Services - Athens	Claiborne	Fluids
16	Hackmann Water Resources Corp	De Soto	Transfer Station
17	Pinnergy, Ltd.	De Soto	Fluids
18	River Birch - Avondale	Jefferson	E&P Waste Landfill/Class 1 Fluids
19	U.S. Liquids - Mermontau	Jefferson Davis	Solids/Fluids
20	SWD Inc.	Jefferson Davis	Fluids
21	MBO, Inc. Lacassine	Jefferson Davis	Solids/Fluids
22	Charles Holston - Jennings	Jefferson Davis	Fluids
23	U.S. Liquids - Bourg	Lafourche	Solids/Fluids
24	Newpark - Fourchon I	Lafourche	Transfer Station
25	U.S. Liquids - Fourchon I	Lafourche	Transfer Station
26	Newpark - Fourchon II	Lafourche	Transfer Station
27	U.S. Liquids - Fourchon II	Lafourche	Transfer Station
28	LaSalle/Grant Landfill	LaSalle	E&P Waste Landfill Permitted by DEQ
29	Woodside Landfill	Livingston	E&P Waste Landfill Permitted by DEQ
30	CWI - White Oaks Landfill	Ouachita	E&P Waste Landfill Permitted by DEQ
31	Magnolia Landfill	Ouachita	E&P Waste Landfill Permitted by DEQ
32	Newpark - Venice	Plaquemines	Transfer Station
33	U.S. Liquids - Venice	Plaquemines	Transfer Station
34	Reliable Landfill	Pointe Coupee	E&P Waste Landfill Permitted by DEQ
35	U.S. Liquids - Red River	Red River	Transfer Station
36	ESI - Sabine Landfill	Sabine	E&P Waste Landfill Permitted by DEQ
37	FAS Environmental	St. Martin	Fluids
38	FAS Environmental	St. Martin	Transfer Station
39	U.S. Liquids - Bateman Island	St. Mary	Solids/Fluids
40	Newpark - MCY	St. Mary	Transfer Station
41	PSC Industrial Outsourcing	St. Mary	Solids/Fluids
42	U.S. Liquids - MCY	St. Mary	Transfer Station
43	Houma SWD	Terrebonne	Fluids
44	Houma SWD	Terrebonne	Transfer Station
45	Newpark - ICY	Vermilion	Transfer Station
46	Charles Holston - Gueydan	Vermilion	Fluids
47	U.S. Liquids - ICY	Vermilion	Transfer Station
48	Nabors Well Services	Webster	Fluids
49	Lebus Oilfield Service	Webster	Fluids
50	Webster Parish Landfill	Webster	E&P Waste Landfill Permitted by DEQ
51	Stateline Vacuum Services	Webster	Fluids



Hydraulic Fracturing Rule

LAC 43:XIX.118

- Effective as of October 20, 2011
- Must file application with and receive work permit to hydraulically frack from the appropriate district office (Lafayette, Shreveport, & Monroe) prior to beginning fracking operations. Sec. 118.B.
- Following completion of hydraulic fracturing the operator must file a Well History and Work Resume Report (Form WH-1) in accordance with Sec. 105 & Sec. 118.C.
- LAC 43:XIX.105 requires:
 - At least 12 hours prior notice must be given to the manager of the appropriate district office, so that a Conservation representative may have a chance to witness the fracturing operations.
 - Within 20 days of completing work under the work permit, the work must be described on the Well History and Work Resume Report and submitted to the appropriate district office.



What Must Be Reported?

- With the Well History and Work Resume Report (Form WH-1), the following information must be reported:
 - Types and volumes (in gal.) of hydraulic fracturing fluid used in the operation.
 - A list by type of all additives used during hydraulic fracturing operations. Specifically list the following for each type:
 - Specific trade name and suppliers.
 - List of chemical ingredients in fracturing fluid subject to requirements of 29 CFR 1910.1200(g)(2) and their associated CAS numbers. Also specify for each chemical ingredient:
 - Maximum ingredient concentration within the additive expressed as a chemical by mass of each chemical ingredient;
 - Maximum concentration of each chemical ingredient expressed as a percentage by mass of the total volume of hydraulic frac fluid used.



How to Report?

- On the Work History/Well Resume Report (Form WH-1) submitted to the appropriate district office within 20 days of completion of the hydraulic fracturing operations.
- Frac Focus Chemical Disclosure Registry – online accessible registry sponsored by Groundwater Protection Council and the Interstate Oil & Gas Compact Commission.
 - Fracfocus.org
 - Search for specific well information by location, operator, well name, etc.
 - Under new reporting requirements, must report within 20 days of completion of hydraulic fracturing operations.
 - Reporting on Frac Focus does not fully replace WH-1 Requirement.
- Similar Publicly Available Websites.



Confidential Information

- Like similar statutes or regulations in other jurisdictions, the new fracturing information reporting requirements provide that specific chemical ingredient identity and CAS numbers entitled to trade secret designation pursuant to 29 CFR Sec. 1910.1200(i), do not need to be reported.
- When a trade secret is claimed by the party entitled to make such a claim, then the following information must be provided:
 - The chemical family of the trade secret ingredient; and
 - A statement claiming that trade secret protection is being made.
 - Statement may be as simple as stating that the ingredient is “privileged”, “proprietary” or a “trade secret.”
- Despite this protection, no party can withhold trade secret information from a health care professional when such disclosure is required by state or federal law.



TMS ACTIVITY UPDATE

- Wells
- Units
- Production
- How to Access Information

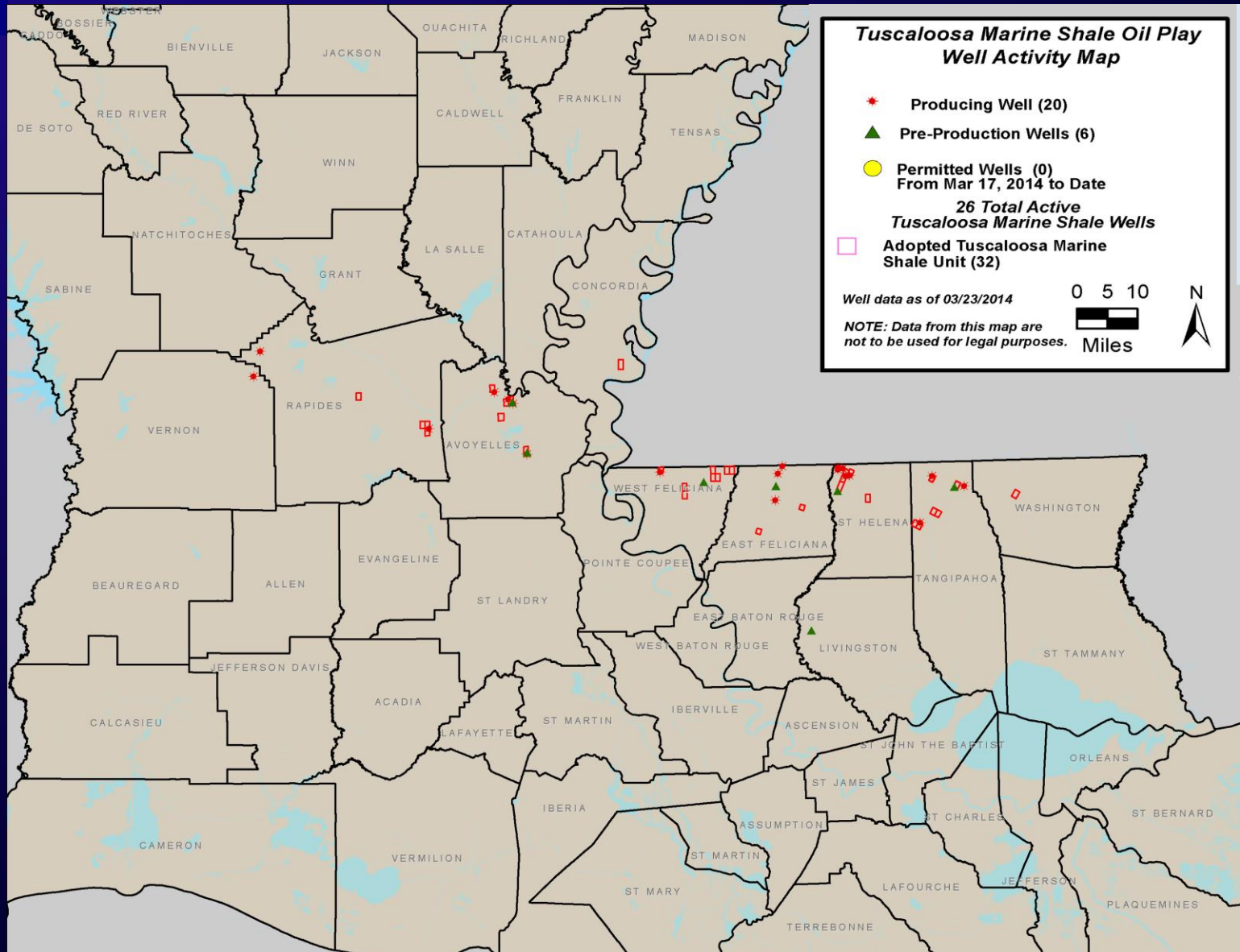


T.M.S. UNITIZATION

- 26 Hearings held to date
- 32 Units adopted to date
- 1 Upcoming hearing for Little Comite Creek Fld. on April 15
- Units configured to accommodate long horizontal laterals
- Unit Sizes: Dependent upon operators' ability to drill horizontal laterals to a length that fits their individual economics and technical expertise as well as their geological interpretation
- Unit Sizes range from 720 acres (East Feliciana Parish, Ethel Field) to 1348 acres (Concordia Parish, North Bougere Field); approximately one mile wide by the approximate proposed horizontal lateral length.



SONRIS Interactive TMS Map







TMS Production by Unit/Well

Field Name	Parish	Well Name/Unit Name	Cumulative Prod. (bbls.)
Baker Creek	West Feliciana	Murphy 63H #1 - TMS RA SUA	48755
Lake Rosemound	West Feliciana	TMS RA SUA	-
Bayou Sara	West Feliciana	TMS RA SUA	-
Spillman	West Feliciana	TMS RA SUA & SUB	-
Northeast Spillman	West Feliciana	TMS RA SUA	-
Richland Plantation	East Feliciana	Richland Plantation A No. 1	13753
Richland Plantation	East Feliciana	Richland Farms Inc. 74 H No. 1	64904
Beech Grove Plantation	East Feliciana	Beech Grove Land Co. 68H No. 1	14498
Ethel	East Feliciana	TMS RA SUA; Lane 64 NO. 1	76
Clinton	East Feliciana	TMS RA SUA	-
North Chipola	St. Helena	Weyerhaeuser No. 1	36934
North Chipola	St. Helena	Weyerhaeuser 60H No. 1	28,426 *
North Chipola	St. Helena	Weyerhaeuser 60H No. 2	28,426 *
North Chipola	St. Helena	TMS RA SUD	36,331 (July, 2013 - Dec. 2103)
North Chipola	St. Helena	Weyerhaeuser 73H No. 1	90091
North Chipola	St. Helena	TM RA SUC	7291
North Chipola	St. Helena	TMS RA SUA; Weyerhaeuser 72H NO. 1	38736
Northwest Liverpool	St. Helena	TMS RA SUA; Weyerhaeuser 14H NO. 1	105850
Little Silver Creek	Tangipahoa	Winfred Blades No. 1	26214
Little Silver Creek	Tangipahoa	TMS RA SUA	-
Little Silver Creek	Tangipahoa	TMS RA SUB and SUC	-
Northwest Wilmer field	Tangipahoa	TMS RA SUA and SUB	-
Fluker	Tangipahoa	TMS RA SUA; Soterra 6H No. 1	33554
Kentwood	Tangipahoa	TMS RA SUA; Thomas 38H No. 1	72044
Burnstown	Vernon	Bentley Lumber 32 No. 1	843
Bayou Twisty	Avoyelles	TMS RA SUA; Dupuy Land Co. 20H No.	55522
Bayou Twisty	Avoyelles	TMS RA SUB; Dupuy Land Co. 30H No.	34154
Flatwoods	Rapides	Bentley Lumber 34 H No. 1	9935
Lake Roseau	Avoyelles	TMS RA SUA; Gauthier 14H No. 1	25174
Roxana	Rapides	TMS RA SUA; Broadway H No. 1	3798
Vick	Avoyelles	TMS RA SUA; Paul 15H No. 1	29459
Oden Lake	Rapides	TMS RA SUA; Lambright H No. 1	-



TMS Production Totals by Parish And Total cumulative for TMS in Louisiana

Total Production by Parish (from Greatest to Least)

- | | |
|----|-------------------------------|
| 1. | St. Helena = 372,085 bbls. |
| 2. | Avoyelles = 144,309 bbls. |
| 3. | Tangipahoa = 131,812 bbls. |
| 4. | East Feliciana = 93,231 bbls. |
| 5. | West Feliciana = 48,755bbls. |
| 6. | Rapides = 13,733 bbls. |
| 7. | Vernon = 843 bbls. |

Total Production = 804,768 bbls.



LDNR/CONSERVATION DATA ACCESS

SONRIS <http://sonris.com/>

Strategic Online Natural Resources Information System

Energy

Coastal Management

Mineral Resources-State owned lands/water bottoms

Conservation

Well Data/Production & Test Data/Unitization Data

GIS-Maps with various land/culture and oil and gas layers

Oil and Gas Hearing Transcripts-Not available online

Unit Survey Plats-Available online



SONRIS DATA ACCESS – LITE – CODES/LOOKUPS

API Offshore Area Code Information
Area Code Information
Consumer Information
District Information
[DNR Glossary](#)
Drip Point Information by Field
Drip Point Information by Name
Drip Point Information by Organization
Facility Code Description
Field List by Requested District & Area
[Field Listing](#)
Fields by Parish
Group Code Information
LUW Information by Code Number
LUW Type Codes Information
LUWs by Field
LUWs by Name

Location Codes
Operation Type Codes
[Organization Information by Name](#)
Organization Ledger Listing-Alpha
Organization Ledger Listing-Numeric
Organization Type Codes
Organizational Mailing Address List
Organizations by Parish
[Parish Code Information](#)
Product Type Code Information
Retrieve Operator Compliance Details
Reservoir Nomenclature Abbreviations
[Scout Report Codes and Terminology](#)
Well Class Type Information
[Well Status Code List](#)



SONRIS DATA ACCESS – LITE – WELL INFORMATION

Offshore Wells By Parish
Orphan Wells By Parish
Permitted Wells By Date
[Permitted Wells By Date/Parish](#)
Retrieve Compliance Review By Serial Number
[Scout Report Information](#)
Severance Tax Relief Report
Well Count for Field By Organization
Well Count for Organization By Field
[Well Permits by District](#)
Wells by API Number
Wells by Field ID
Wells by Lambert Coordinates
Wells by Lambert Coordinates - Tabular
Wells by LUW
[Wells by Organization Name](#)
[Wells by Parish](#)
[Wells by Section, Township and Range](#)
[Wells By Section, Township, Range By Parish](#)
[Wells by Serial Number](#)
[Wells by Specific Field / Operator](#)
Wells (Excluding Well Status 03,28,29,30)



SONRIS DATA ACCESS – LITE – PRODUCTION INFORMATION

Disposition by Field, Operator, Report Date
Disposition by Operator, Date and Field
Field Production by Parish for a Period
Field Production by Year

Field Production for an Organization
by Month

LUW Production By Month

LUW Production By Year

Louisiana LUW Production by Year

Monthly Parish Production for a Period

OGP Data Entry (Oil & Gas Production)

OGP Ledger by Commingling Facility

OGP Ledger by LUW

Operator Oil/Gas Production for a Year
Operator Production by Parish
Organization Production for a Field
by Month

R5D Data Entry (Gas Disposition)

R5D DE Disposition by Operator & Field
for 3 years

Ranking Gas Production by Field

Ranking Gas Production by Operator

Ranking Oil Production by Field

Ranking Oil Production by Operator

Statewide Monthly Production for a Year

Yearly Production by Parish



Public Information

- The majority of information collected by the Office of Conservation is available to the public free of charge through the DNR website – SONRIS (www.sonris.com)
 - Access to the DNR Database
 - Access to map-based (GIS) information (Geographic Information System (GIS))
 - Access to images of documents on file



Contact Information

Key personnel to answer questions regarding SONRIS/TMS

IT issues (applications not working) DNR Help Desk 225-342-4556 in the Baton Rouge area or toll-free 888-792-0432 outside the area.

Well production information—**Production Audit Section** 225-342-5530
or 225-342-5265

TMS well/unit information:

Geologist Mike Kline 225-342-3335

TMS Page-Conservation Web page-[News and Events](#)-Tuscaloosa Marine Shale



Leasing Private Lands

Land man will visit with an offer. He should have:

1. Map to describe area of interest
2. Lease Form – the lease form is the contract to set the terms of the lease.

Primary Terms – amount of time the contract is valid;
usually 3 – 5 years.

Price Per Acre

Royalty – percentage of royalty produced by the unit



Ideas to consider in advance:

Surface Leasing – Separate lease to allow surface facilities

Will the well be located on your property?

Unitization - Will you be included in a unit?

Royalty payments are dependent on unit participation.

Length of Terms -

How deep will the well be?

It may take a long time to drill.

Royalty & Price per Acre

What is a fair value?

Is it good to be the first or last to lease?

Favored nations clause

Brokerage firms – broker leases to drilling company
for percentage of royalty



Ideas to consider in advance:

What companies are leasing in the area?

1. OMR Interactive Maps

Web based interactive map allows user to select which map features are visible to build a clear view of relative information.



SONRIS Interactive Maps - GIS

DEPARTMENT OF NATURAL RESOURCES
STATE OF LOUISIANA

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Oil & Gas Energy Mineral Resources Conservation Coastal Management

Louisiana.gov > Department of Natural Resources

Text Size: + -

SONRIS
Database Access
Document Imaging
GIS Imaging
ACCESS DNR DATA »

INFORMATION PORTALS
For Visitors
For Students & Researchers
For Employees
FEATURED SERVICES
Featured Services A-Z Listing
Hotline Numbers
Bayou Corne Incident 2012
Haynesville Shale
Ground Water Resources Program
RFPs, SFP, RSIQs - Contracts
State Energy Data & Analysis
Get a Game Plan
Bayou Corne Incident 2012 >>



Welcome to the Department of Natural Resources


LATEST NEWS
Mineral and Energy Board holds March Lease Sale
During Groundwater Awareness Week, March 9-15 »
February Lease Sale by Mineral and Energy Board results in \$1.1 million for state »
DNR Atchafalaya Basin Program announces new primitive camp sites and photo contest »
State Mineral and Energy Board holds January Lease Sale »
Mineral and Energy Board holds December lease sale »
Conservation Statewide Order 29-R Fee Schedule for 2013/14 »
Mineral and Energy Board brings \$2.6 million in revenue from November Lease Sale »
News Archives »

WORKING FOR LOUISIANA


UPCOMING MEETINGS AND EVENTS
MAR 25 Oil and Gas Hearings
APR 01 Oil and Gas Hearings
APR 08 Oil and Gas Hearings
APR 09 State Mineral and Energy Board Meeting and Lease Sale
APR 15 Oil and Gas Hearings
View All Meetings »
Message from the Secretary
Welcome from DNR Secretary Stephen Chustz and the men and women of the Louisiana Department of Natural Resources who work every day to ensure and promote sustainable and responsible use of the natural resources of our state so that they are available for the enjoyment



SONRIS Interactive Maps - GIS

















**SONRIS**
Strategic Online Natural Resources Information System


Louisiana.gov > Department of Natural Resources > SONRIS

Baton Rouge, LA Weather: 64°F, Clear

[Click Here to Register Now!](#)
April 11, 2014
SONRIS Workshop
Baton Rouge, LA
Register for this one-day event!

DNR uses its Administrative Web Server as the electronic access portal to information about DNR stored in static pages on the Administrative Web Server, and to update SONRIS information available from other DNR Web servers. The public now has access via their Web browser to various tool sets within SONRIS:

 GIS Access Retrieve information using interactive, geographically oriented, map capabilities, and select from a variety of layers of backgrounds.	 Dashboard Click here for oil & gas charts and more.	 Data Access Oil & gas information and more at your finger tips.	 Document Access Millions of documents in various formats readily available for view and print.
 Online Well Log Submission Submit your Well Log electronically. Click Here to view preliminary guidelines & training for submission.	 Online Production Reporting Report oil & gas online, refer to the User Guide for instructions	 Online Royalty Reporting Report mineral royalty online, refer to Tutorial for instructions	 Online UIC Reporting Report UIC online
 Online Surface Water Apply and track surface water application online visit our Louisiana Surface Water Management Program	 UIC Online Data Entry Reports Click here for UIC online data entry reports	 Invoice Payments Pay invoices online; invoice number and security code are needed	 Tract Nominations Click here for detailed instructions for online tract nomination
 Legacy Lawsuits Helpful reports for Legal cases. For use of Reports on Demand	 Contact/Data Request Click here to contact us or submit a request for data	 FAQ Frequently Asked Questions and more....	 Downloads Click here to get required components

**Disaster Preparation Reports:**
Helpful reports for hurricane season. For use of Reports on Demand, view the tutorial.

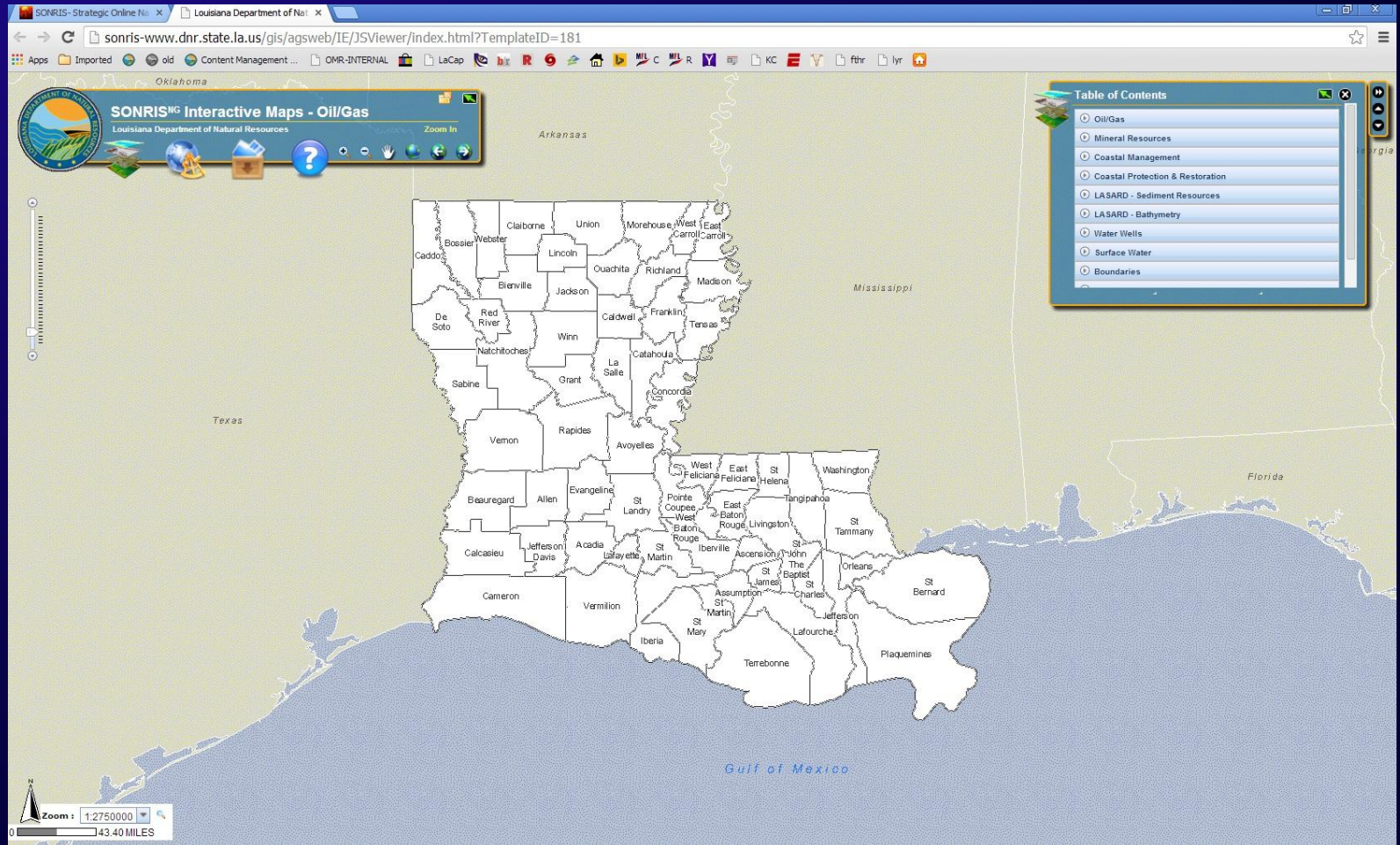
These servers provide this service to the public via dynamic pages generated on a number of Web Servers. For more information on how these Web servers fit into DNR's computing architecture and future direction, you are invited to review the project overview for the Strategic Online Natural Resources Information System [Here](#).

Disclaimer

The information on this Web site has been carefully prepared from the best available sources of data. It is intended for general informational purposes only and should not be considered authoritative for navigational, engineering, other site-specific uses, or any other uses. The Louisiana Department of Natural Resources (DNR) does not warrant or guarantee its accuracy, nor does DNR assume any responsibility or liability for any reliance thereon.

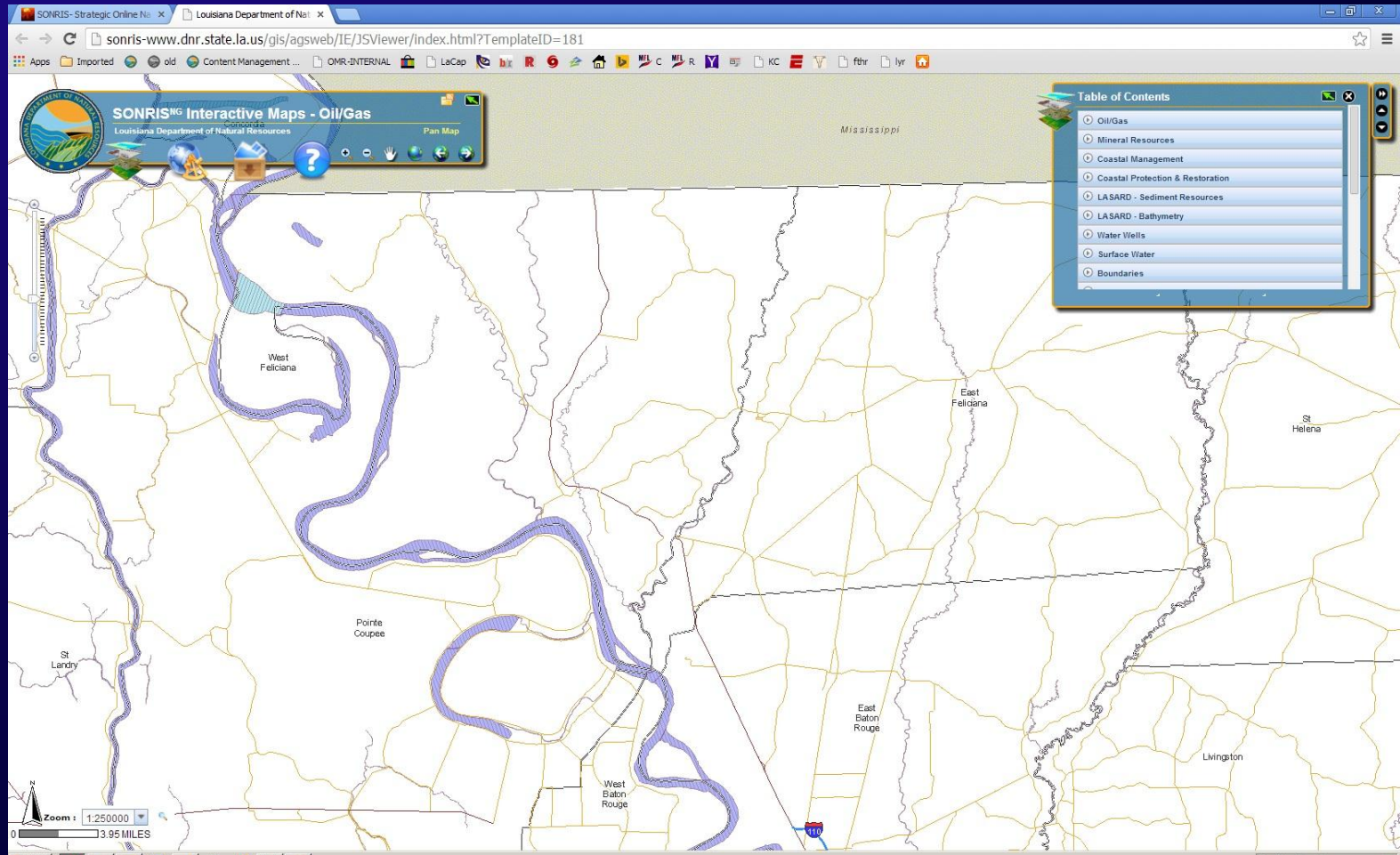


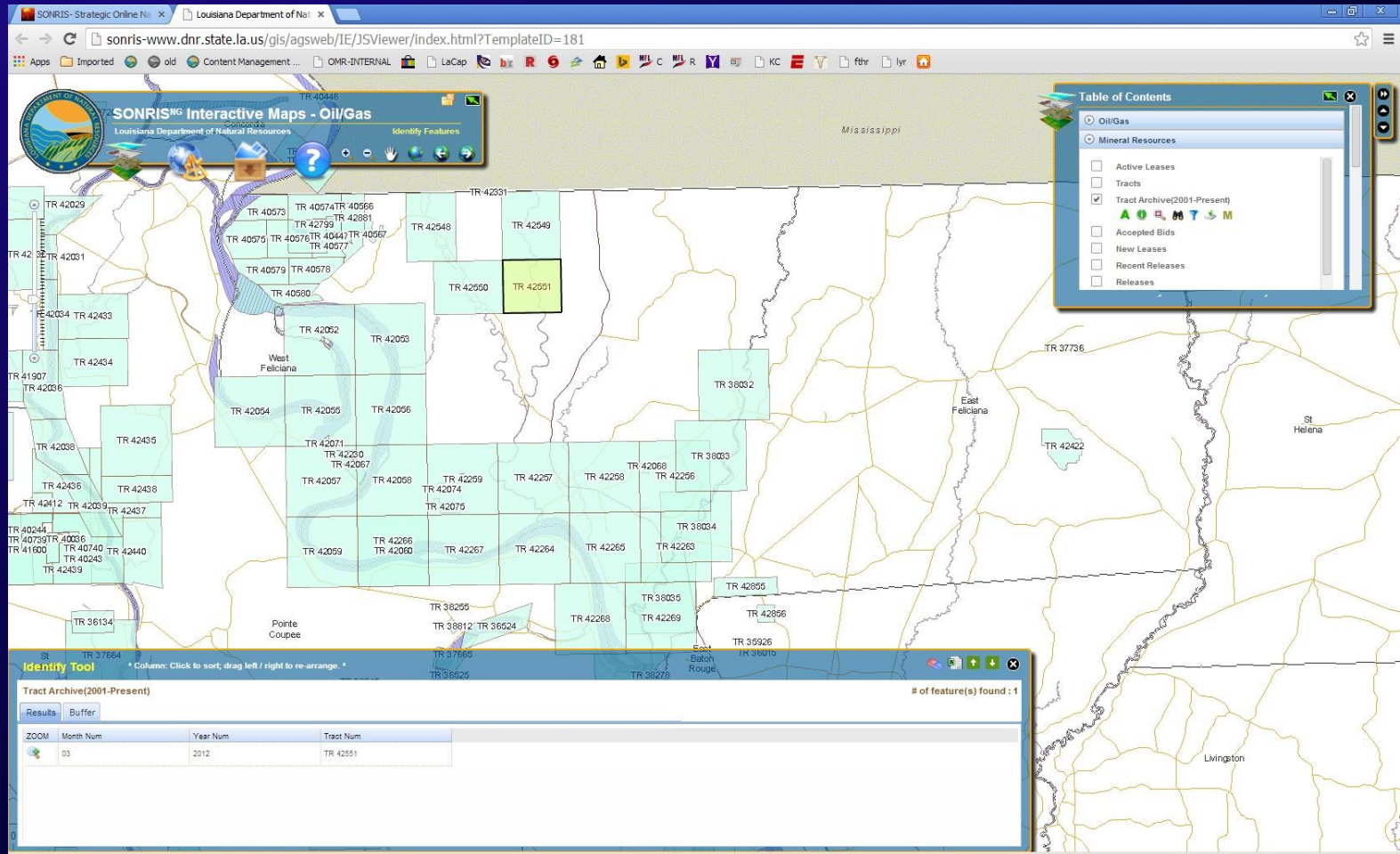
SONRIS Interactive Maps - GIS





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SONRIS- Strategic Online No. x Louisiana Department of Nat. x Search Results x

ucmwww.dnr.state.la.us/ucmsearch/FindDocuments.aspx?idx=xstateleasenum&val=20890

Apps Imported old Content Management... OMR-INTERNAL LaCap R C ML R Y KC ftr lyr

 Department of Natural Resources
Content Management Search

Back to Search Print this page

Page 1 of 1. Search returned 13 documents.

Row	Alt View	Info	Document	ApplicantName	Companyname	Description	Pages	Reflum	StateLeasenum	Tractflum	CreateDate	Date	DocumentType
1					SCHOEFFLER ENERGY GROUP, INC.	AWARDED LEASE	1		20890		1/5/2012 3:19PM	1/3/2012 12:00AM	OMR CORRESPONDENCE
2				THEOPHILUS OIL, GAS & LAND SERVICES, LLC			2		20890	42551	4/9/2012 2:52PM	3/13/2012 12:00AM	BID FORM
3					THEOPHILUS OIL, GAS & LAND SERVICES, LLC	PLAT	1	Uploaded By OMR scanning personnel	20890		4/2/2012 10:06AM	3/14/2012 12:00AM	STATE LEASE
4					THEOPHILUS OIL, GAS & LAND SERVICES, LLC		2		20890		4/11/2012 10:32AM	3/14/2012 12:00AM	UNEXECUTED STATE LEASE
5					THEOPHILUS OIL, GAS & LAND SERVICES, LLC		15		20890		4/11/2012 10:44AM	3/14/2012 12:00AM	STATE LEASE
6					THEOPHILUS OIL, GAS & LAND SERVICES, LLC	AWARDED LEASE	1		20890		4/11/2012 10:11AM	4/4/2012 12:00AM	OMR CORRESPONDENCE
7					THEOPHILUS OIL, GAS & LAND SERVICES, L.L.C.	RECORDING INFORMATION	1		20890		4/19/2012 11:01AM	4/16/2012 12:00AM	CORRESPONDENCE
8					THEOPHILUS OIL, GAS & LAND SERVICES, L.L.C.		9		20890		9/14/2012 11:20AM	8/8/2012 12:00AM	ASSIGNMENT
9					THEOPHILUS OIL, GAS & LAND SERVICES, L.L.C.	DOCKET 9, ASSIGNMENT	3		20890		9/18/2012 2:28PM	9/10/2012 12:00AM	OMR CORRESPONDENCE
10					THEOPHILUS OIL, GAS & LAND SERVICES, L.L.C.	RECORDING INFORMATION	2		20890		9/19/2012 4:30PM	9/19/2012 12:00AM	CORRESPONDENCE
11					DEVON ENERGY PRODUCTION COMPANY, LP		19		20890		8/9/2013 3:09PM	7/10/2013 12:00AM	ASSIGNMENT
12					THEOPHILUS OIL, GAS & LAND SERVICES, L.L.C.	DOCKET #10, ASSIGNMENT	5		20890		9/4/2013 4:45PM	7/29/2013 12:00AM	OMR CORRESPONDENCE
13					THEOPHILUS OIL, GAS & LAND SERVICES, L.L.C.	RECORDING INFORMATION	1		20890		8/23/2013 3:24PM	8/12/2013 12:00AM	CORRESPONDENCE



SONRIS Interactive Maps - GIS

SONRIS - Strategic Online Resources

sonris-www.dnr.state.la.us/gis/agsweb/IE/JSViewer/index.html?TemplateID=181

SONRISTM Interactive Maps - Oil/Gas

Table of Contents

- Oil/Gas
 - ☒ Active Leases
 - ☐ Tracts
 - ☒ Tract Archive(2001-Present)
 - ☐ Accepted Bids
 - ☐ New Leases
 - ☐ Recent Releases
- Mineral Resources

Identify Tool

Active Leases

Results Buffer

ZOOM	Lease Num	Doc Access	Current Owners	More Info	Label	Sale Date	Product De
	SL 20890	Document Access	Current Owners	Lease Details	Description	03/13/2012	0.2

of feature(s) found : 1



SONRIS Interactive Maps - GIS

SONRIS - Strategic Online No. x Louisiana Department of Nat. x LDNR Office of Mineral Reso. x

sonlite.dnr.state.la.us/sundown/cart_prod/cart_min_owners2?p_lease_num=20890

Apps Imported old Content Management ... OMR-INTERNAL LeCap

LDNR Office of Mineral Resources

Lease Ownership Report

Lease Num	Owner Name	State Interest	Working Interest	Portion ID
20890	DEVON ENERGY PRODUCTION COMPANY, L.P.	.2	.6666667	Δ
20890	TIPTOP ENERGY PRODUCTION COMPANY US LLC	.2	.3333333	Δ



SONRIS- State Online No. : Louisiana Department of Natural Resources

LDNR Office of Mineral Resources

sonlrite.dnr.state.la.us/sundown/cart_prod/cart_min_qld2?please_num=20890

LDNR Office of Mineral Resources

State Lease Information

Lease Basic Info

Lease Num	Original Lessee	Lease Eff Date	Primary Term	In Kind Flag	Lieu Royalty Term Code	Sale Date	Tract Num	Block Num	Offshore Area Code	Range Id	Section Id	Township Id	Dedicated Percent
20890	THEOPHILUS OIL, GAS & LAND SERVICES, LLC	03/14/2012	3	N	05	03/14/2012	42551	N/A	N/A	R03W	80	T01S	
20890	THEOPHILUS OIL, GAS & LAND SERVICES, LLC	03/14/2012	3	N	05	03/14/2012	42551	N/A	N/A	R03W	43	T01S	
20890	THEOPHILUS OIL, GAS & LAND SERVICES, LLC	03/14/2012	3	N	05	03/14/2012	42551	N/A	N/A	R03W	83	T01S	
20890	THEOPHILUS OIL, GAS & LAND SERVICES, LLC	03/14/2012	3	N	05	03/14/2012	42551	N/A	N/A	R03W	84	T02S	
20890	THEOPHILUS OIL, GAS & LAND SERVICES, LLC	03/14/2012	3	N	05	03/14/2012	42551	N/A	N/A	R03W	39	T02S	
20890	THEOPHILUS OIL, GAS & LAND SERVICES, LLC	03/14/2012	3	N	05	03/14/2012	42551	N/A	N/A	R03W	34	T02S	
20890	THEOPHILUS OIL, GAS & LAND SERVICES, LLC	03/14/2012	3	N	05	03/14/2012	42551	N/A	N/A	R03W	48	T02S	
20890	THEOPHILUS OIL, GAS & LAND SERVICES, LLC	03/14/2012	3	N	05	03/14/2012	42551	N/A	N/A	R03W	51	T02S	
20890	THEOPHILUS OIL, GAS & LAND SERVICES, LLC	03/14/2012	3	N	05	03/14/2012	42551	N/A	N/A	R03W	79	T02S	
20890	THEOPHILUS OIL, GAS & LAND SERVICES, LLC	03/14/2012	3	N	05	03/14/2012	42551	N/A	N/A	R03W	78	T02S	
20890	THEOPHILUS OIL, GAS & LAND SERVICES, LLC	03/14/2012	3	N	05	03/14/2012	42551	N/A	N/A	R03W	3	T02S	
20890	THEOPHILUS OIL, GAS & LAND SERVICES, LLC	03/14/2012	3	N	05	03/14/2012	42551	N/A	N/A	R03W	46	T02S	
20890	THEOPHILUS OIL, GAS & LAND SERVICES, LLC	03/14/2012	3	N	05	03/14/2012	42551	N/A	N/A	R03W	50	T02S	
20890	THEOPHILUS OIL, GAS & LAND SERVICES, LLC	03/14/2012	3	N	05	03/14/2012	42551	N/A	N/A	R03W	47	T02S	
20890	THEOPHILUS OIL, GAS & LAND SERVICES, LLC	03/14/2012	3	N	05	03/14/2012	42551	N/A	N/A	R03W	40	T02S	
20890	THEOPHILUS OIL, GAS & LAND SERVICES, LLC	03/14/2012	3	N	05	03/14/2012	42551	N/A	N/A	R03W	42	T02S	
20890	THEOPHILUS OIL, GAS & LAND SERVICES, LLC	03/14/2012	3	N	05	03/14/2012	42551	N/A	N/A	R03W	85	T02S	
20890	THEOPHILUS OIL, GAS & LAND SERVICES, LLC	03/14/2012	3	N	05	03/14/2012	42551	N/A	N/A	R03W	82	T02S	

Product Type Info

Lease Num	Product Decimal	Product Type Code	Description
20890	.2000000	10	OIL
20890	.2000000	20	GAS
20890	.2000000	50	PLANT PRODUCTS

Lease Info

Lease Num	Retained Acres	Leased Acres	Rental	Bonus	Price/Acre
20890	39.000	39.000	\$4,875.98	\$9,751.95	\$250.05

Lease Instruments

Lease Num	Instrument Id	Lease Inst Type Code	Description	Instrument Date	Description
20890	A	66	STATE LEASE	03/14/2012	STATE LEASE THEOPHILUS OIL, GAS & LAND SERVICES, LLC 263 THIRD STREET, SUITE 312 BATON ROUGE, LA 70801 COB 190, PAGE 813, FILE 107185 (WEST FELICIANA)
20890	B	1	ASSIGNMENT	08/08/2012	ASSIGNMENT DOCKET ITEM NO. 9 FROM THE AUGUST 8, 2012 MEETING BE APPROVED, SAID INSTRUMENT BEING AN ASSIGNMENT FROM THEOPHILUS OIL, GAS & LAND SERVICES, L.L.C. TO DEVON ENERGY PRODUCTION COMPANY, L.P., OF ALL OF ASSIGNOR'S RIGHT, TITLE AND INTEREST IN AND TO STATE LEASE NOS. 20887, 20888, 20889 AND 20890, WEST FELICIANA PARISH, LOUISIANA. DEVON ENERGY PRODUCTION COMPANY IS DESIGNATED AS THE JOINT ACCOUNT LESSEE (CONTACT PERSON) PURSUANT TO STATE MINERAL AND ENERGY BOARD RESOLUTION DATED SEPTEMBER 10, 1975. FOR ORIGINAL INSTRUMENT SEE SL 20887 "B" COB 193, PAGE 454, FILE NO. 108259 (WEST FELICIANA)
20890	C	1	ASSIGNMENT	07/10/2013	ASSIGNMENT DOCKET ITEM NO. 10 FROM THE JULY 10, 2013 MEETING BE APPROVED, SAID INSTRUMENT BEING AN ASSIGNMENT FROM DEVON ENERGY PRODUCTION COMPANY, LP TO TIPTOP ENERGY PRODUCTION US LLC, AN UNDIVIDED 33.3% OF ASSIGNOR'S RIGHT, TITLE AND INTEREST IN AND TO STATE LEASE NOS. 20769, 20887, 20888, 20889 AND 20890, WEST FELICIANA PARISH, LOUISIANA. FOR ORIGINAL INSTRUMENT, SEE SL 20769 "D" COB 197, PAGE 244, #110268 (WEST FELICIANA)



Ideas to consider in advance:

Which companies are leasing in the area?

2. Clerk of Court Office

Leases Documents are recorded.

Terms of lease are public information.



**Thank you for the opportunity
to speak to you today**

Questions?